

Climate Change Pakistan Fact Sheet

Greenhouse Gas emissions (GHGs)

- 0.8 percent of global emissions
- 5th in the list of countries most affected by Climate Change
- 135th place among global emitters
- **Total GHG emissions in 2015:** 405 MTCO₂
- **Energy:** 185.97 MTCO₂ (45.9% of total share)
- **Agriculture:** 174.56 MTCO₂ (43.1% of total share)
- **Industry:** 21.85 MTCO₂ (5.4% of total share)
- **Waste:** 12.29 MTCO₂ (3% of total share)
- **Forestry and Land-Use:** 10.39 MTCO₂ (2.5% of total share)

Total expected GHG emissions by 2030: 1,603 MTCO₂

- **Energy:** 898 MTCO₂ (56% of total share)
 - **Agriculture:** 457 MTCO₂ (28.5% of total share)
 - **Industry:** 130 MTCO₂ (8.1% of total share)
 - **Waste:** 89 MTCO₂ (5.6% of total share)
 - **Forestry and Land-Use:** 29 MTCO₂ (1.8% of total share)
- Paris Climate Accord:** Pledged to reduce 20% of its projected GHG emissions by 2030
Approx. **\$40 billion** would be required to achieve this milestone

Nationally Determined Contributions (NDCs)

- Estimated GHG emission share of Agriculture sector to be reduced from 457 MTCO₂ to 414 MTCO₂ by 2030 with the help of donors/partners
- 43 MTCO₂ of GHG emissions abated
- Estimated GHG emission share of Energy sector to be reduced from 898 MTCO₂ to 763 MTCO₂ by 2030 with the help of donors/partners
- 135 MTCO₂ of GHG emissions abated

Clean Green Pakistan Movement

Launched 25th Nov 2019

CGPI: 19 Cities competition

5 point Agenda/Pillars:

- Total Sanitation
- Liquid Waste Management & Hygiene
- Tree Plantation
- Solid Waste Management
- Safe Drinking Water

Pakistan's first "Zero Emission" metro launched in Karachi



Forests

- Asia's highest deforestation rate up to 2.1% in the past
- Since 2014: 1 Billion Trees planted in Khyber Pakhtunkhwa, resulting in increased forest cover by 6.3%
- Aiming to plant 10 billion tree in next few years



- Pledged to restore 100,000 hectares of degraded land under the Bonn Challenge



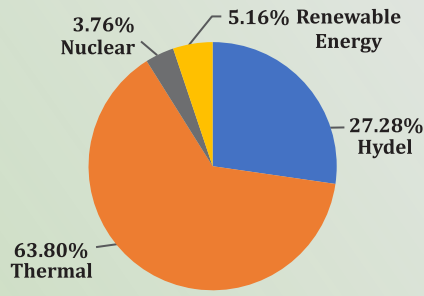
BONN CHALLENGE

- Surpassed the target by restoring approx. 348,000 hectares

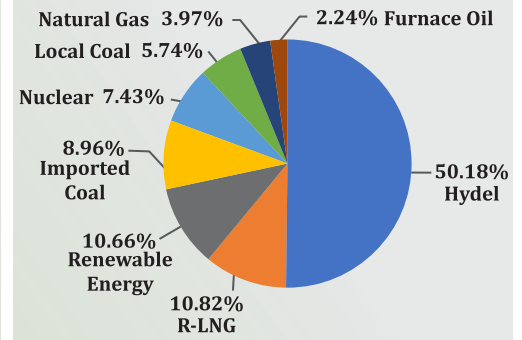
<p>National Parks</p>	<p>29 National Parks</p> <ul style="list-style-type: none"> • 8 AJ&K, 6 GB, 6 KP, 6 Punjab, 2 Balochistan, 1 Sindh <p><i>(Complete list of all National Parks is attached as Annexure - A)</i></p>	
<p>Mangrove</p>	<ul style="list-style-type: none"> • 7th largest Mangrove forest in the world • 1980 -2015, mangrove forest cover reduced from 345,000 ha to 95,000 ha (reduction of 250,000 ha) 	<ul style="list-style-type: none"> • Global conservation success story with increasing Mangrove cover, currently at around 131,000 ha
<p>Blue Economy</p>	<ul style="list-style-type: none"> • 1,050 km long coastline • Exclusive Economic Zone covering about 240,000 sq. km 	<p>Astola Island, Balochistan.</p> <ul style="list-style-type: none"> • First ever Marine Protected area in Pakistan, 2017
<p>Climate Risk Transfer & Financing</p>	<p>Initiatives-aligned with Paris Agreement's article 8.</p> <ul style="list-style-type: none"> • National Catastrophe Model (NatCat Model) being developed by NDRMF that covers hazards i.e. Floods, Droughts, Tropical Cyclones and Earthquakes • More options are being explored for risk insurance of facilities, climate risk pooling and other insurance solutions <p>Scheme introduced in the past:</p> <ul style="list-style-type: none"> • Crop Loan Insurance Scheme launched by Ministry of Finance & State Bank in 2008-2009 • Loan Portfolio cover scheme (Loan borrowed by farmers are covered under this scheme) • Covers climate related hazards such as floods, droughts, cyclones and excessive rains. Also covers crop diseases and pest attacks • 5 million beneficiaries since its inception <p>Recently launched schemes:</p> <ul style="list-style-type: none"> • Agriculture Crop Insurance initiative launched by Agriculture Department, Govt. of Punjab with the help of World Bank • \$300 million Subsidy Program. • Covers 3 major crops i.e. Rice, Cotton & wheat • Offers risk cover in 18 districts of Punjab • Provides insurance cover against hazards like floods, droughts, rains, hailstorms and pest attacks. • 225,000 policies underwritten so far 	
<p>Wildlife</p>	<p>Bringing Species back from endangered list</p> <p>Markhor:</p> <ul style="list-style-type: none"> • Pakistan's National Animal, Declared endangered species in 1994 • Number dropped to less than 100 in the past • Current Count: 3500 <p>Indus River Dolphins:</p> <ul style="list-style-type: none"> • Population in 2001: 1200 • Current Count as of 2017: 1,816 (almost 50% increase) <p>Snow Leopard:</p> <ul style="list-style-type: none"> • Number touched as low as 200 • Current Count: 420 <p>Urial:</p> <ul style="list-style-type: none"> • Number dropped to less than 200 in the past • Current Count: 2541 	

Energy

Current Energy Mix 2019



Planned Energy Mix by 2030



Eco-tourism

Major ecosystem/landscape

- Alpine and sub-alpine
- Dry temperate forest
- Moist temperate forest
- Subtropical thorn/ Scrub
- Riverine forest
- Desert and semi desert
- Mangrove and estuaries
- Marine, Irrigated and rainfed

5 out of top 14 highest peaks (Above 8000 meters)

- K2
- Nanga Parbat
- Gasherbrum I
- Broad peak
- Gasherbrum II

Mountaineers Paradise

Largest number of Glaciers outside the polar region

Sustainable Tourism Foundation Pakistan:

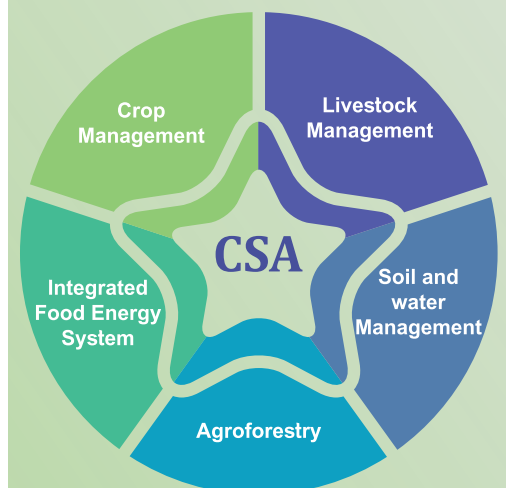
- Conservation of River Indus Dolphin through Community Based Ecotourism.
- Promotion of Ecotourism in the Project Areas of Pakistan Wetlands Program
- Green Trekking Campaign

Climate Smart Agriculture (CSA)

- Agriculture is the key sector in Pakistan employing around 25 million and contributing to roughly 20-25% of GDP
- Changes in monsoons and increased temperatures pose serious risk to agricultural yields
- Agriculture is responsible for 43% of all GHG emissions mainly through livestock
- CSA technologies and practices help improve efficiency of livestock and reduction in GHG emissions
- Country is making efforts to incorporate renewables (solar + bioenergy) to overcome energy shortages
- Climate-related expenditure has been low in the past. The new Pakistan Climate Change Act is expected to help mobilize domestic and international funds for CSA
- CSA Program launched in 16 districts of Punjab

CSA:

- Increases **Productivity** and Agricultural Income
- Enhances Resilience (Climate Change **Adaptation**)
- Reduces/removes GHG emissions where possible (**Mitigation**)



Eco-System Restoration Fund

Newly established Eco-system Restoration Fund:

- Afforestation/10 Billion Tree Tsunami (TBTT)
- Recharge Pakistan
- Reversing land degradation and conserving biodiversity
- Promoting Blue Economy and restoration of marine protected areas
- Promoting Eco-tourism



Wetlands

- 19 designated wetlands.
- Covered area: 780,000 ha
- 9.7% of total surface area of Pakistan
- 225 significant wetland sites
- 19 are recognized by Ramsar convention bureau

Wetland dependent species

- Urial and Indus River Dolphin
- 20 threatened bird species
- 12 reptiles
- 2 species of amphibians
- Support 191 to 198 fresh water species
- 788 marine and estuarine fish species

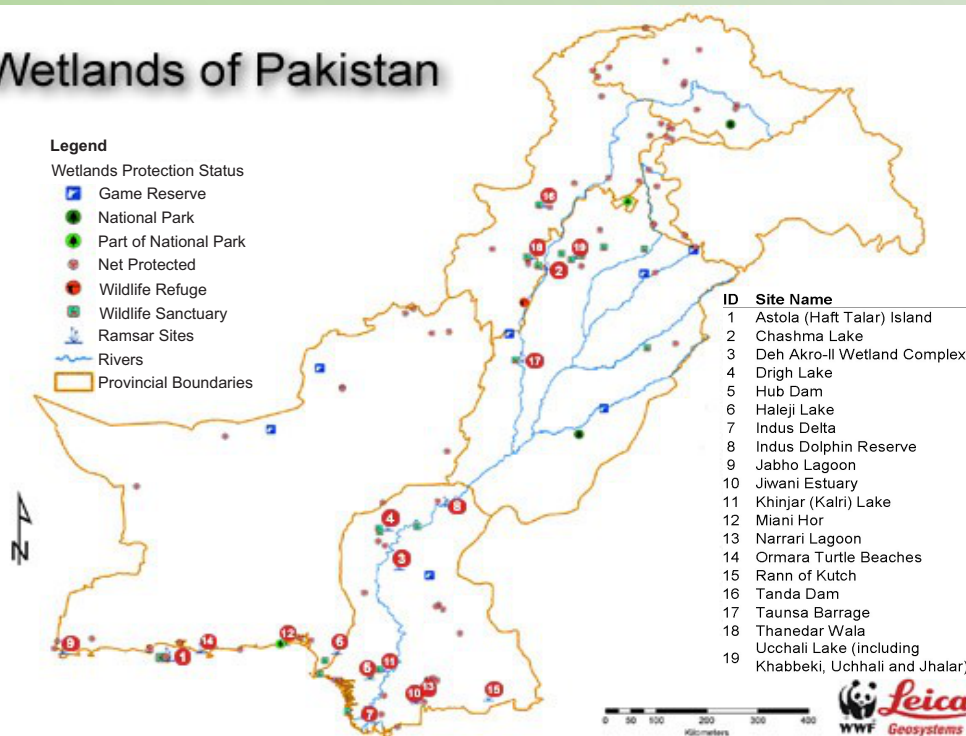
Project implementation regions under “Recharging Pakistan initiative”:

- Esa Khel Watershed
- D.I. Khan Watershed
- Darya Khan – Ramak Floodplain
- Lala Creek
- Kaha Watershed
- Chakkar Lehri Watershed
- Manchar & Hamal Wetlands Complex
- Nara, Deh Akro & Chotiari Wetlands Complex
- Hadero & Haleji Wetlands Complex

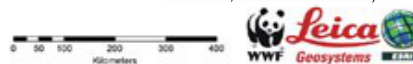
List of all Designated Wetlands

Wetlands of Pakistan

- Legend**
- Wetlands Protection Status
- Game Reserve
 - National Park
 - Part of National Park
 - Net Protected
 - Wildlife Refuge
 - Wildlife Sanctuary
 - Ramsar Sites
 - Rivers
 - Provincial Boundaries



ID	Site Name
1	Astola (Haft Talar) Island
2	Chashma Lake
3	Deh Akro-II Wetland Complex
4	Drigh Lake
5	Hub Dam
6	Haleji Lake
7	Indus Delta
8	Indus Dolphin Reserve
9	Jabho Lagoon
10	Jiwani Estuary
11	Khinjar (Kalri) Lake
12	Miani Hor
13	Narrari Lagoon
14	Ormara Turtle Beaches
15	Rann of Kutch
16	Tanda Dam
17	Taunsa Barrage
18	Thanedar Wala
19	Ucchali Lake (including Khabbeki, Uchhali and Jhalar)



List of all National Parks

Sr.	National park	Established	Area	Coordinates
PUNJAB				
1	Ayub National Park	—	931 ha (2,301 acres)	33.566700°N 73.499998°E
2	Chinji	1987	6,095 ha (15,061 acres)	33.010242°N 72.491940°E
3	Kala Chitta	2009	36,965 ha (91,343 acres)	33.642685°N 72.400824°E
4	Lal Suhanra	1972	87,426 ha (216,034 acres)	29.397409°N 72.025811°E
5	Margalla Hills	1980	17,386 ha (42,962 acres)	33.754317°N 72.956429°E
6	Murree Kotli Sattian Kahuta National Park	2009	57,581 ha (142,286 acres)	33.739032°N 73.471344°E
GILGIT BALTISTAN				
7	Shandur National Park	2012	3,312 ha (8,184 acres)	33.865231°N 73.138768°E
8	Central Karakoram	1993	1,390,100 ha (3,435,012 acres)	36.897708°N 75.093545°E
9	Deosai	1993	358,400 ha (885,626 acres)	34.972626°N 75.396423°E
10	Khunjerab	1975	226,913 ha (560,714 acres)	36.500805°N 75.643616°E
11	Qurumber	2011	74,000 ha (182,858 acres)	36.863141°N 73.781038°E
12	K2	—	233,468 ha (576,912 acres)	35.788171°N 76.182888°E
SINDH				
13	Kirthar	1974	308,733 ha (762,896 acres)	25.658107°N 67.548975°E
KHYBER PAKHTUNKHWA				
14	Broghil Valley	2010	134,744 ha (332,960 acres)	36.841164°N 73.335697°E
15	Chitral Gol	1984	7,750 ha (19,151 acres)	35.933082°N 71.670693°E
16	Lulusar-Dudipatsar	2003	30,375 ha (75,058 acres)	35.090698°N 73.929749°E
17	Manglot National Park	1990	710.628 ha (1,756 acres)	36.10°N 73.23°E
18	Saiful Muluk	2003	4,867 ha (12,027 acres)	34.880862°N 73.698349°E
19	Sheikh Badin	1993	15,540 ha (38,400 acres)	32.382281°N 70.949707°E
AZAD JAMMU & KASHMIR				
20	Deva Vatala	2009	2,993 ha (7,396 acres)	32.892583°N 74.303172°E
21	Gumot	2004	27,271 ha (67,388 acres)	35.006943°N 74.200287°E
22	Musk Deer National Park	2009	52,815 ha (130,509 acres)	34.731456°N 74.786682°E
23	Machiara	1996	13,532 ha (33,438 acres)	34.506557°N 73.565140°E
24	Pir Lasura	2005	5,625 ha (13,900 acres)	33.639204°N 73.846664°E
25	Poonch River Mahaseer	2010	4,500 ha (11,120 acres)	33.555272°N 73.91599°E
26	Toli Pir	2005	5,045 ha (12,466 acres)	34.12090°N 73.633118°E
27	Panjtal Mastan	2005	5,045 ha (12,466 acres)	34.0574°N 73.7381°E
BALUCHISTAN				
28	Hazarganji-Chiltan	1980	15,555 ha (38,437 acres)	30.285695°N 67.202298°E
29	Hingol	1988	165,004 ha (407,734 acres)	25.526246°N 65.085996°E